PDR RID Report

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Priority 2

Category Name Status-Interoperability **Actionee** Project (Schwaller)

Sub Category

Subject Interoperability

Description of Problem or Suggestion:

From interoperability view point, Version 1 release time is too late, because PIP requires interoperability between EOSDIS and ASTER on Version 1 base.

Originator's Recommendation

Version 0 base interoperability should be desirable.

GSFC Response by: Matt Schwaller **GSFC Response Date** 7/7/95

ESDIS recognizes the timing issue raised by the RID. However, it is the ESDIS position that IMS interoperability between EOSDIS and the ASTER Ground Data System (GDS) should be based on the V1 architecture.

ESDIS understands the ERSDAC recommendation that IMS interoperability between EOSDIS and the ASTER GDS should be based on the V0 architecture. The V0 architecture and protocols currently exist, and have been tested as an "operational prototype" in the CEOS Catalog Interoperability Test Experiments (CINTEX).

There are, however, several disadvantages to implementing the V0 architecture in the EOSDIS-to-ASTER GDS interface. The most important shortcomings of V0 include the following:

* Because the V0 architecture was developed as a prototype, V0 is intended to have a limited lifetime. It is expected that at sometime in the future that EOSDIS will no longer support the V0 protocols: there will be a complete transition from V0 to V1. Although no date has been specifically set for this transition, it is certain that this transition will take place during the lifetime of the ASTER GDS (duration of the EOS-AM1 program + 10 years), and it is likely that the transition will take place during the lifetime of the AM1 mission. Under this scenario, ERSDAC would need to transition to V1 at sometime in the future, and perhaps sometime in the relatively near future. By adopting the V1 architecture at the onset, ERSDAC will avoid the cost and risk associated with a transition from V0 to V1 during the AM1 mission operation time-period.

* Version 0 was designed as a prototype for testing among the 7 original DAACs that comprised EOSDIS in the early 1990s. Although the prototype has expanded from its inception, the design is not easily scaleable to a large number of V0 servers.

Benefits of V1 include the following:

* The V1 architecture is being specifically designed to accommodate distributed clients and servers, and the V1 architecture will accommodate the expected expansion of IMS clients and servers throughout the international community.

* The V1 IMS will be designed and implemented as an operational capability, and will thus have a greater degree of functionality, reliability, and usability as compared to V0, which was developed as a prototype only.

Although ESDIS has stated its preference for V1, ESDIS will work with ERSDAC to reach a mutually agreeable architecture and protocol for the EOSDIS-to-ASTER GDS IMS interface. As a starting point for reaching this agreement, the ESDIS Project has proposed wording in the ASTER Project Implementation Plan Volume 2 (Ground Data System) for using the V1 architecture in the EOSDIS-to-ASTER GDS interface. Wording in the PIP also includes the ESDIS policy for IMS software re-use by ERSDAC.

ESDIS will work closely with ERSDAC to resolve any timing and coordination issues associated with ERSDAC's adoption of the V1 architecture.

HAIS Response by: **HAIS Schedule**

HAIS R. E. **HAIS Response Date**

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HAIS R. E. **HAIS Response Date**

Status **Closed** **Date Closed** **7/21/95** **Sponsor** **McDonald**

****** **Attachment if any** ******